§ 111.105–15 Additional methods of protection.

Each item of electrical equipment that is—

(a) A sand-filled apparatus must meet IEC 79–5;

(b) An oil-immersed apparatus must meet either IEC 79–6 or NEC article 500–2;

(c) Type of protection ''e'' must meet IEC 79–7;

(d) Type of protection ''n'' must meet IEC 79–15; and

(e) Type of protection ''m'' must meet IEC 79–18.

[CGD 94–108, 61 FR 28284, June 4, 1996]

§ 111.105–17 Wiring methods for hazardous locations.

(a) Through runs of marine shipboard cable meeting subpart 111.60 of this part are required for all hazardous locations. Armored cable may be used to enhance ground detection capabilities. Additionally, Type MC cable may be used subject to the restrictions in § 111.60–23.

(b) Where conduit is installed, the applicable requirements of either the NEC or IEC 79 must be followed.

(c) Each cable entrance into explosionproof or flameproof equipment must be made with approved seal fittings, termination fittings, or glands that meet the requirements of § 111.105–9.

(d) Each cable entrance into Class II and Class III (Zone 10, 11, Z, or Y) equipment must be made with dust-tight cable entrance seals approved for the installation.

[CGD 94–108, 61 FR 28284, June 4, 1996, as amended at 62 FR 23909, May 1, 1997]

§ 111.105–19 Switches.

A switch that is explosionproof or flameproof, or that controls any explosionproof or flameproof equipment, under § 111.105–19 must have a pole for each ungrounded conductor.

[CGD 94–108, 61 FR 28284, June 4, 1996]

§ 111.105–21 Ventilation.

A ventilation duct which ventilates a hazardous location has the classification of that location. Each fan for ventilation of a hazardous location must be nonsparking.

[CGD 94–108, 61 FR 28285, June 4, 1996]

§ 111.105–27 Belt drives.

Each belt drive in a hazardous location must have:

(a) A conductive belt; and

(b) Pulleys, shafts, and driving equipment grounded to meet NFPA No. 77.

§ 111.105–29 Combustible liquid cargo carriers.

(a) Each vessel that carries combustible liquid cargo with a closed-cup flashpoint of 60 degrees C (140 degrees F) or higher must have:

(1) Only intrinsically safe electric systems in cargo tanks; and

(2) No storage battery in any cargo handling room.

(b) If a submerged cargo pump motor is in a cargo tank, it must meet the requirements of § 111.105–31(d).

(c) Where the cargo is heated to within 15°C of its flashpoint, the cargo pumproom must meet the requirements of § 111.105–31(f) and the weather locations must meet § 111.105–31(l).

[CGD 74–125A, 47 FR 15236, Apr. 8, 1982, as amended by CGD 94–108, 61 FR 28285, June 4, 1996; 61 FR 36787, July 12, 1996; 61 FR 39695, July 30, 1996]

§ 111.105–31 Flammable or combustible cargo with a flashpoint below 60 degrees C (140 degrees F), liquid sulphur carriers and inorganic acid carriers.

(a) *Applicability*. Each vessel that carries combustible or flammable cargo with a closed-cup flashpoint lower than 60 degrees C (140 degrees F) or liquid sulphur cargo, or inorganic acid cargo must meet the requirements of this section, except—

(1) A vessel carrying bulk liquefied flammable gases as a cargo, cargo residue, or vapor which must meet the requirements of § 111.105–32; and

(2) A vessel carrying carbon disulfide must have only intrinsically safe electric equipment in the locations listed in paragraphs (e) through (l) of this section.

(b) *Cable location*. Electric cable must be as close as practicable to the centerline and must be away from cargo tank openings.